EA Form R 1/2007

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Big Horn Conservation District
   724 W 3rd St
   Hardin, MT 59034

2. Type of action: Conservation District Change Application 43P 30149472 (BH-1901)

3. Water source name: Bighorn River

4. Location affected by project: Section 20, T1S, R33E

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

   This application is to add a place of use to the Big Horn Conservation District Water Reservation water right (43P 9952-00). A maximum volume of 486 AF/YR of the Big Horn Conservation District water reservation would be used for center pivot irrigation on 135 acres (3.6 AF/AC). The proposed place of use is in the SW of Section 20, T1S, R33E, Big Horn County. The water be diverted from the Bighorn River using the Two Leggins Canal headgate located in the NESWSE Section 20, T2S, R33E. This application will share a secondary POD, pump, and mainline distribution system with Conservation District Records BH-1302 (43P 30068985) and BH-1502 (43P 30111550). No additional flow rate is requested through this application. The combined flow rate of BH-1302 (43P 30068985), BH-1502 (43P 30111550), and BH-1901 (43P 30148308) is limited to the current flow rate of 6.1 CFS (2,729 GPM). The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
   (include agencies with overlapping jurisdiction)
   Montana Department of Natural Resources and Conservation
   Montana Department of Fish, Wildlife, and Parks
   Montana Department of Environmental Quality
   Montana Sage Grouse Habitat Conservation Program
   Montana Natural Heritage Program
   United States Natural Resource Conservation Service
   United State Fish and Wildlife Service

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **–** The Bighorn River between Afterbay Dam and the confluence with the Little Bighorn River is listed as periodically dewatered by the Montana Department of Fish, Wildlife, and Parks. The proposed use will appropriate Conservation District water reserved for irrigation purposes as planned and will have little effect on water quantity because it appropriates water during periods of relatively high flow.

Determination: No significant impact

Water quality **–** The Bighorn River from the Crow Indian Reservation boundary to the mouth (confluence with the Yellowstone River) is listed as water quality category 5 by the Montana Department of Environmental Quality. This category includes waters where one or more applicable beneficial uses are impaired or threatened and a TMDL is required to address the factors causing the impairment or threat. This source is listed as fully supporting agricultural uses but as not fully supporting drinking water due to lead and mercury levels from unknown sources. The beneficial use support for primary contact recreation and aquatic life has not been assessed. The proposed use of water for high efficiency center pivot sprinkler irrigation will not impair the water quality on this source.

Determination: No significant impact

Groundwater **–** Irrigation using water from the Bighorn River has no likely impact on groundwater quality or quantity. Infiltration of irrigation water may locally increase the availability of groundwater.

Determination: No significant impact

DIVERSION WORKS - The Applicant proposes to divert water from the Bighorn River in NESWSE Section 20, T2S, R33E using the Two Leggins Canal headgate. The water will be conveyed through the canal to a secondary point of diversion in the NENENE Section 28, T1S, R33E, pumped into a buried pipeline, and conveyed to the 135 acre center pivot irrigation system in the SW Section 20, T1S, R33E. The proposed primary and secondary diversions are already established and used for existing irrigation projects. The addition of a high efficiency center pivot to the existing diversion works is not likely to cause any significant impact.

Determination: No significant impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **–** According to the Montana Natural Heritage Program, there are11 animal species of concern and 1 special status species in the proposed project area. Animal species of concern include Black-tailed Prairie Dog, Merriam's Shrew, Preble's Shrew, Golden Eagle, Great Blue Heron, Greater Sage-Grouse, Spiny Softshell turtle, Snapping Turtle,

Plains Hog-nosed Snake, Western Milksnake, and Sauger. The Bald Eagle is a special status species in the area. There are no plant species of concern listed by the Montana Natural Heritage Program. According to the Montana Sage Grouse Habitat Conservation Map, this project is within general sage grouse habit. The project is consistent with the Montana Sage Grouse Conservation Strategy according to a letter from Carolyn Sime, Project Manager, dated July 30, 2020. The proposed project is consistent with the current agricultural use of land in the area and is not likely to impact threatened or endangered species or create barriers to migration or movement of fish or wildlife.

Determination: No significant impact

Wetlands – There are no wetlands in the proposed project area.

Determination: No impact

Ponds – There are no ponds associated with the proposed project.

Determination: No impact

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE – According to the USDA Natural Resources Conservation Service, the predominant soil type in the project area is Hydro-Gilt Edge complex, 0 to 1 percent slopes. This soil is type well drained and slightly saline to strongly saline. Shonkin clay loam also makes up a portion of the soil type in the project area. This soil type is poorly drained and very slightly to slightly saline. Neither of these soil types is considered to be prime farmland. The use of center pivot irrigation on these soils could cause some saline seep.

Determination: Possible Impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS – Existing vegetative cover in the area is agricultural. High efficiency center pivot irrigation will increase productivity. The installation of pipelines and pivots may contribute to the establishment and spread of noxious weeds. It is the responsibility of the property owner to monitor for and implement measures for noxious weed control.

Determination: No significant impact

AIR QUALITY – Sprinkler irrigation of agricultural land will not impact air quality.

Determination: No impact

HISTORICAL AND ARCHEOLOGICAL SITES – NA-project not located on State or Federal Lands.

Determination: Not applicable

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - No additional demands on environmental resources are recognized.

Determination: No impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS – There are no known locally adopted environmental plans or goals.

Determination: Not applicable

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES – The proposed project is located on privately owned agricultural land. The project will not impact access to recreational or wilderness activities.

Determination: No impact

HUMAN HEALTH – No impacts to human health have been identified for the proposed irrigation project.

Determination: No impact

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**x**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: No impact

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(*b)* *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(*d)* *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: No secondary impacts are recognized

Cumulative Impacts: No cumulative impacts are recognized

3. *Describe any mitigation/stipulation measures:* None

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:* The alternative to the proposed project is the no action alternative. The no action alternative prevents the property owner from utilizing the agricultural land to the full potential and prevents the Conservation District from fulfilling their goal of utilizing reserved water for irrigation. The no action alternative does not prevent or mitigate any significant environmental impacts.

PART III. Conclusion

1. Preferred Alternative: Issue the change authorization if the applicant proves the criteria in 85-2-402 MCA are met.

2 Comments and Responses: None

3. *Finding:*
*Yes__ No_**x**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

There are no significant impacts associated with the project so an environmental assessment is the appropriate level of analysis.

Name of person(s) responsible for preparation of EA:

Name: Jill Lippard
Title: Water Resource Specialist
Date: 10/09/2020